

INFORMATION SYSTEMS PROGRAM

ANNUAL REPORT

INPUT

NOVEMBER 1987

INPUT

NOTES:

UP87: I-1

INPUT



OVERVIEW

- ☐ Objectives
- ☐ Annual Planning Procedures
- ☐ Major Issues
 - Driving Forces
 - Issues and Objectives
 - New Technology
- ☐ New Applications
- ☐ Budget Analysis

INPUT

NOTES:

UP87: I-2

INPUT



OBJECTIVES

- ☐ Identify and Analyze
 - Business Forces Impacting Information Systems
 - New Technologies of High Impact
 - Trends in Information Systems Spending
- ☐ Provide INPUT's Views on
 - Resulting Objectives for IS
 - Key Opportunities & Applications Trends

INPUT

NOTES:

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INFORMATION SYSTEMS PROGRAM ANNUAL PLANNING REPORT PROCESS



NOTES:

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INPUT



INFORMATION SYSTEMS PROGRAM

ANNUAL REPORT

MAJOR ISSUES

INPUT

NOTES:

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INPUT



ISSUE HIERARCHY

MAJOR ISSUE SECTION	FOCUS	TIMEFRAME
Driving Forces	Strategic	Over 3 Years
Issues	Tactical	2 - 3 Years
Objectives	Operational	0 to 2 Years

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NOTES:

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DRIVING FORCES

- ☐ Rising Expectations of Senior Management
- ☐ Expanding Wealth of New Technologies
- ☐ Cost-Sensitive Business Environment

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DRIVING FORCES (Continued)

- ☐ Ability to Conceptualize More Complex Applications
- ☐ Growing Interaction Between Large Corporations
- ☐ Unstable Organizational Environments

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NOTES:

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MAJOR ISSUES-1988 AND BEYOND

- ☐ Data Management
- ☐ Connectivity
- ☐ Integration
- ☐ User Involvement
- ☐ Development Productivity
- ☐ Business Contribution

INPUT

NOTES:

UP87: II-5

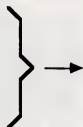
INPUT



MAJOR ISSUES

ELEMENTS

Current
Status/
Activities



INPUT

NOTES:

UP87: II-6

INPUT



MAJOR ISSUES

ELEMENTS

Current
Status/
Activities



TRENDS

Current/
Projected
Response



INPUT

NOTES:

UP87: II-7

INPUT



MAJOR ISSUES

ELEMENTS

Current
Status/
Activities

TRENDS

Current/
Projected
Response

OBJECTIVES

Goals
for IS

INPUT

NOTES:

UP87: II-8

INPUT



MAJOR ISSUE-DATA MANAGEMENT

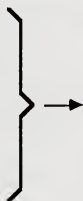
ELEMENTS

Physically
Distributed
Data

Growing User
Access

Multiple DBMS
Technologies

Inadequate
Data Control



INPUT

NOTES:

UP87: II-9



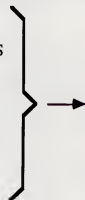
MAJOR ISSUE-DATA MANAGEMENT

TRENDS

Move to RDBMS

Adopting DBMS
on Distributed
Systems

Renewed Move
to Data
Dictionaries



INPUT

NOTES:

UP87: II-10

INPUT



MAJOR ISSUE-DATA MANAGEMENT

OBJECTIVES

Learn RDBMS



Train the User
on RDBMS

Select a
Standard for
Each Level

Strengthen Data
Processes

INPUT

NOTES:

UP87: II-11

INPUT



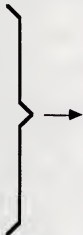
MAJOR ISSUE-INTEGRATION

ELEMENTS
Multivendor
Environments

Computer to
Computer
Data Transfer

Larger, More
Complex
Applications

Data Transfer
to Outsiders



INPUT

NOTES:

UP87: II-12

INPUT



MAJOR ISSUE-INTEGRATION

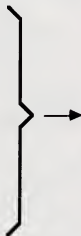
TRENDS

Dist'd. Processing
Strategies

Vendor
Support for
Standards

Purchase
Decisions Tied
to Integration

Outside Expertise



INPUT

NOTES:

UP87: II-13

INPUT



MAJOR ISSUE-INTEGRATION

OBJECTIVES

Standards,
Standards,
Standards



Pressure
the Vendor

Educate
the User

INPUT

NOTES:

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INPUT



MAJOR ISSUE-CONNECTIVITY

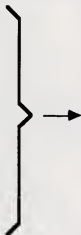
ELEMENTS

More PCs than
Terminals

PC is the
Manager's
Terminal

Bi-Directional
Data Transfer

Power of the
Workstation
Growing Quickly



INPUT

NOTES:

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INPUT



MAJOR ISSUE-CONNECTIVITY

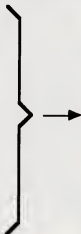
TRENDS

PCs Commonly
Connected

PC Interface
as Standard

PC as Dept'l.
System
Workstations

LANs Evolving
Slowly



INPUT

NOTES:

UP87: II-16

INPUT



MAJOR ISSUE-CONNECTIVITY

OBJECTIVES

Standards for
Connectivity



Info Center
in Charge

Programmable
Workstation
Preference

INPUT

NOTES:

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INPUT



MAJOR ISSUE-USER INVOLVEMENT

ELEMENTS

Mgmt. is the User

Appetite for Data

Dept'l. Computers
vs. PCs

Applications
without Rules

Power User's
Growing Influence



INPUT

NOTES:

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INPUT



MAJOR ISSUE-USER INVOLVEMENT

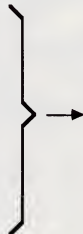
TRENDS

More Power at
the Workstation

Access to Data

Defining Own
Environment

Developing Own
Applications



INPUT

NOTES:

UP87: II-19

INPUT



MAJOR ISSUE-USER INVOLVEMENT

OBJECTIVES

Strengthen
End-User Computing
Function



Flexible Standards

Education about
Application
Development

Education about
IS Strategy

INPUT

NOTES:

UP87: II-20

INPUT



MAJOR ISSUE- DEVELOPMENT PRODUCTIVITY

ELEMENTS

Focus on Devel't.
and Architecture

Infra-structure
Changing Rapidly

Control over
Development
Changing

Impact on Installed
Processes and
Applications



INPUT

NOTES:

UP87: II-21

INPUT



MAJOR ISSUE- DEVELOPMENT PRODUCTIVITY

TRENDS

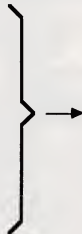
Addressing
Entire Process

Many CASE Tools-
No Proven Leader

4GLs Not the
Long-Term Answer

Go Slow Attitude

Professional Services
Co's. Leading the Way



INPUT

NOTES:

UP87: II-22

INPUT



MAJOR ISSUE- DEVELOPMENT PRODUCTIVITY

OBJECTIVES

Study CASE-Don't
Jump Too Fast

→ User Involvement in
Large Applications

Set Rules for User
Applications

User Education on
Planning for
Computing

INPUT

NOTES:

UP87: II-23

INPUT



MAJOR ISSUE- BUSINESS CONTRIBUTION

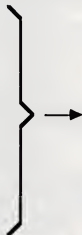
ELEMENTS

Senior User
Influence

Greater Return
on Investment

Business
Knowledge
of Developers

Senior Mgmt.
Expectations
Growing



INPUT

NOTES:

UP87: II-24

INPUT



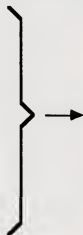
MAJOR ISSUE- BUSINESS CONTRIBUTION

TRENDS

IS Executive
Stature Grows

Increased Business
Justification

Use of Outside
Development
Firms



INPUT

NOTES:

UP87: II-25

INPUT



MAJOR ISSUE- BUSINESS CONTRIBUTION

OBJECTIVES

Assume Strategic Role

→ Expose Senior Mgmt.
to Technology

Monitor Competition's
IS Program

Proactively Consider
Outside Experts

INPUT

NOTES:

UP87: II-26

INPUT



INFORMATION SYSTEMS RECOMMENDED CHANGES OF EMPHASIS

1987-1992

Data Processing —————> Information Flow

Information Quantity —————> Information Quality

Automation of Process —————> Improvement of Process

INPUT

NOTES:

UP87: II-27

INPUT



INFORMATION SYSTEMS PROGRAM

ANNUAL REPORT

IMPACTS OF NEW TECHNOLOGY

INPUT

NOTES:

UP87: III-1

INPUT



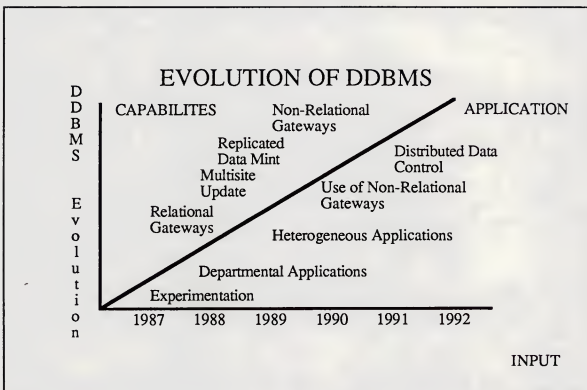
TECHNOLOGICAL DEVELOPMENTS OPTIONS AND ISSUES

- ☐ Data Base-Relational and Distributed
- ☐ Workstations
- ☐ Networking
- ☐ Electronic Data Interchange
- ☐ Managing Technology

INPUT

NOTES:





NOTES:



DDBMS-CRITICAL SUCCESS FACTORS

1. Know Relational DBMS Technology
2. Audit the Data Administration Function
3. Do a Controlled Experiment
4. Use a Homogeneous DBMS Environment
5. Involve a Mature End User
6. Use a Geographically Dispersed Application
7. Select a Non-Strategic Application

INPUT

NOTES:

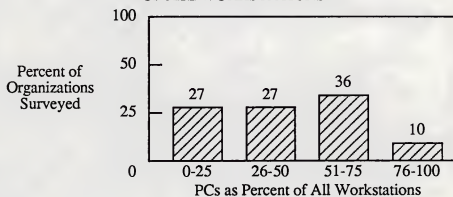
UP87: III-4

INPUT



WORKSTATION TRENDS

PERSONAL COMPUTERS AS A PERCENTAGE OF ALL WORKSTATIONS



INPUT

NOTES:

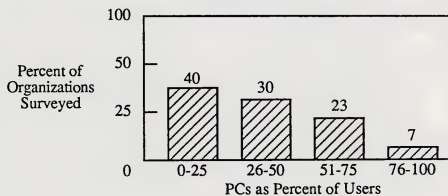
UP87: III-5

INPUT



WORKSTATION TRENDS

PERSONAL COMPUTERS AS A PERCENTAGE OF USERS



INPUT

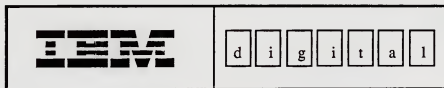
NOTES:

UP87: III-6

INPUT



NETWORKING THE COMMON GROUND



SQL-Standards
Gateway Products
Support for OSI
Third Party Product
Support for "C"

INPUT

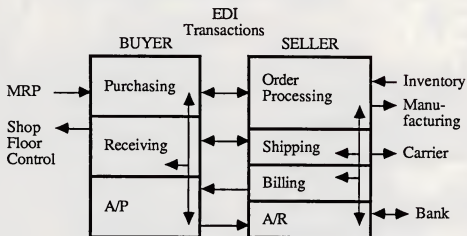
NOTES:

UP87: III-7

INPUT



EDI APPLICATIONS



NOTES:



EDI
"THE WAVE OF THE FUTURE"

- ☐ Applications
- ☐ Enhanced Services: E-mail, E-forms, Data Bases
- ☐ Internetworking
- ☐ Media (Data, Graphics, Voice, Video)

INPUT

NOTES:

UP87: III-9

INPUT



IS MANAGEMENT FOCUS

AREA	NEED
TECHNOLOGY INTEGRATION	Infrastructure Data Management User Interfaces
MANAGEMENT OF IS	Productivity of IS Simplification of Support User-Managed Development
STRATEGIC AND ADVANCED SYSTEMS	

INPUT

NOTES:

UP87: III-10

INPUT



INFORMATION SYSTEMS PROGRAM

ANNUAL REPORT

NEW APPLICATION TRENDS AND DEVELOPMENT RESOURCE ALLOCATION

INPUT

NOTES:

UP87: IV-1

INPUT



NEW APPLICATION TRENDS CROSS INDUSTRY SUMMARY

- ☐ Electronic Data Interchange
- ☐ Business Analysis and Management Tools
- ☐ Purchasing Package Software
- ☐ Strategic Applications
- ☐ RDBMS on the Minicomputer (MID) Level

INPUT

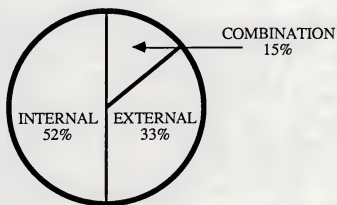
NOTES:

UP87: IV-2

INPUT



SOURCE OF
DEVELOPMENT RESOURCES
GROUP ONE



INPUT

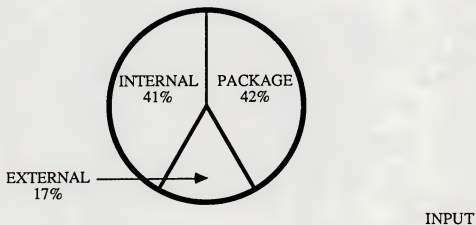
NOTES:

UP87: IV-3

INPUT



SOURCE OF
DEVELOPMENT RESOURCES
GROUP TWO



NOTES:

UP87: IV-4

INPUT



ASSIGNMENT OF APPLICATIONS

DEVELOPMENT STAFF



INPUT

NOTES:

UP87: IV-5

INPUT



INFORMATION SYSTEMS PROGRAM

ANNUAL REPORT

BUDGET ANALYSIS
1987-1988

INPUT

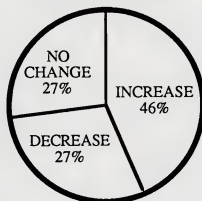
NOTES:

UP87: V-1

INPUT



BUDGET CHANGE FOR ALL
INDUSTRIES



INPUT

NOTES:

UP87: V-2

INPUT



INDUSTRY COMPARISON

INDUSTRY SECTOR HIGH	PERCENT CHANGE		
	4	8	12
Telecommunications	<div></div> 12.0		
Services	<div></div> 10.8		
Transportation	<div></div> 10.3		
Other	<div></div> 10.0		

INPUT

NOTES:

UP87: V-3

INPUT



INDUSTRY COMPARISON

INDUSTRY SECTOR LOW	PERCENT CHANGE		
	0	1	2
Distribution-Wholesale			2.7
Banking & Finance			2.6
Federal Government			2.5
Distribution-Retail		0.0	
Utilities	-0.2		

INPUT

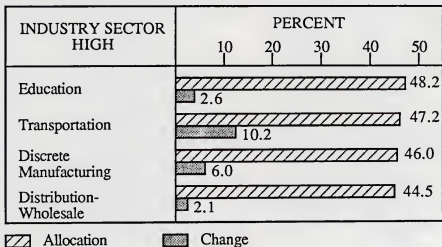
NOTES:

UP87: V-4

INPUT



PERSONNEL EXPENDITURES



INPUT

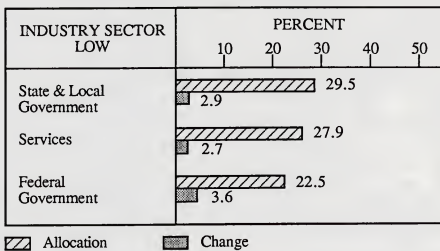
NOTES:

UP87: V-5

INPUT



PERSONNEL EXPENDITURES



INPUT

NOTES:

UP87: V-6

INPUT



PERSONNEL EXPENDITURES

INDUSTRY SECTOR	ALLOCATION (Percent)	CHANGE (Percent)
Largest Change Insurance	34.1	15.3
Smallest Change Distribution-Retail	41.8	1.1

INPUT

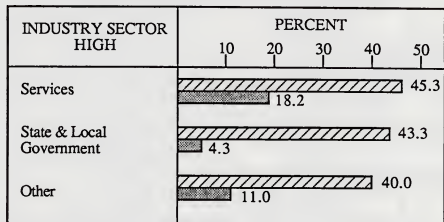
NOTES:

UP87: V-7

INPUT



HARDWARE EXPENDITURES



Allocation

Change

INPUT

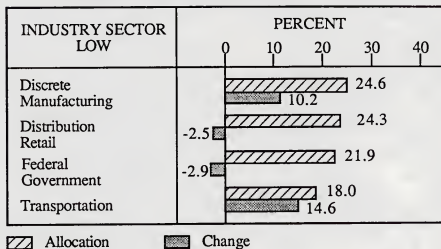
NOTES:

UP87: V-8

INPUT



HARDWARE EXPENDITURES



INPUT

NOTES:

UP87: V-9

INPUT



HARDWARE EXPENDITURES

INDUSTRY SECTOR	ALLOCATION (Percent)	CHANGE (Percent)
Largest Change Services	45.3	18.2
Smallest Change Federal Government	21.9	-2.9

INPUT

NOTES:

UP87: V-10

INPUT



HARDWARE EXPENDITURES

PERCENT CHANGE
MAINFRAME-MINI-MICRO

INDUSTRY SECTOR	MAIN	MINI	MICRO	MASS	OTHER	TOTAL
Services	18.8	0.0	18.8	0.0	17.8	18.2
Transport.	16.4	8.5	7.1	0.0	0.0	14.6
Discr. Mfg.	10.9	6.2	15.1	8.0	3.5	10.2

INPUT

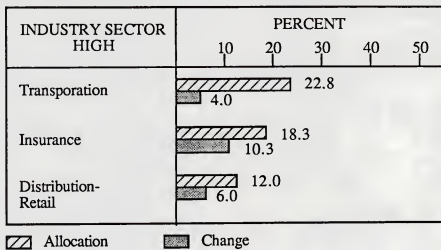
NOTES:

UP87: V-11

INPUT



DATA COMMUNICATIONS EXPENDITURES



INPUT

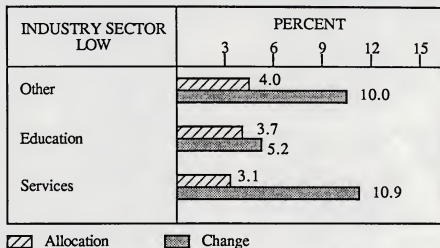
NOTES:

UP87: V-12

INPUT



DATA COMMUNICATIONS EXPENDITURES



INPUT

NOTES:

UP87: V-13

INPUT



DATA COMMUNICATIONS EXPENDITURES

INDUSTRY SECTOR	ALLOCATION (Percent)	CHANGE (Percent)
Largest Change Insurance	18.3	10.3
Smallest Change Telecommunications	5.3	-12.0

INPUT

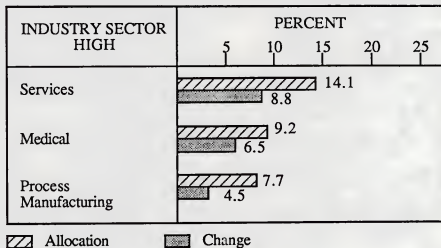
NOTES:

UP87: V-14

INPUT



EXTERNAL SOFTWARE EXPENDITURES



INPUT

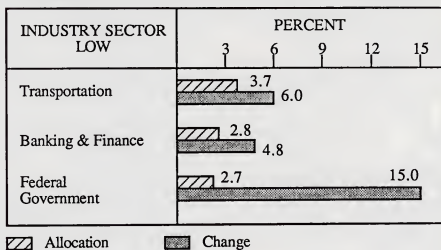
NOTES:

UP87: V-15

INPUT



EXTERNAL SOFTWARE EXPENDITURES



INPUT

NOTES:

UP87: V-16

INPUT



EXTERNAL SOFTWARE EXPENDITURES

INDUSTRY SECTOR	ALLOCATION (Percent)	CHANGE (Percent)
Largest Change Telecommunications	7.2	19.0
Smallest Change Distribution-Retail	6.1	-1.4

INPUT

NOTES:

UP87: V-17

INPUT



INFORMATION SYSTEMS PROGRAM ANNUAL REPORT

1988 PLAN

INPUT

NOTES:

UP87:VI-1



INFORMATION SYSTEMS PROGRAM FOCUS

- Advising IS on Planning for the Future by
 - Assessing & Interpreting the Management Aspects of Key Technology Trends
 - Understanding & Setting Objectives on Critical Issues
 - Analysing the Application Development & Spending Trends

INPUT

NOTES:

UP87:VI-2



INFORMATION SYSTEMS PROGRAM 1988 OBJECTIVES

- Provide Year to Year Program Continuity
- Increase Client Contact
- Increase Vendor Input to Research
- Focus on the Large IS Organization
- Provide Planning & Management Guidance -
Not Technology Analysis

INPUT

NOTES:

UP87:VI-3



INFORMATION SYSTEMS PROGRAM 1988 PROGRAM

2 SEMINARS	3 REPORTS	2 REPORT SERIES
March June	DBMS CASE Annual	Workstation Strategies DEC vs. IBM

INPUT

NOTES:

UP87:VI-4



INFORMATION SYSTEMS PROGRAM 1988 PROGRAM

- Seminars
 - One Day
 - Current Research
 - Other Program Research
 - Outside Speaker

INPUT

NOTES:

UP87:VI-5



INFORMATION SYSTEMS PROGRAM 1988 PROGRAM

- Reports
 - DBMS Focus on Relational DBMS & Data Management Process
 - CASE State of the Technology & its Application
 - Annual Larger Interview Sample & First Half Publication

INPUT

NOTES:

UP87:VI-6



INFORMATION SYSTEMS PROGRAM 1988 PROGRAM

- Report Series

- | | |
|-----------------------------|---|
| - Objective | Continuity of Information &
Increased Depth |
| - Workstation
Strategies | Completion of 1987 Assessment -
Vendor Views |
| - DEC/IBM | Closer Look at Key Issues |

INPUT

NOTES:

UP87:VI-7



INFORMATION SYSTEMS PROGRAM 1988 PROGRAM

- Client Support
 - Hotline
 - Quarterly Vendor Watch
 - Annual Client Conference
 - Annual Onsite Presentation
(Oct/Nov)

INPUT

NOTES:

UP87:VI-8

